



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/790,052

03/02/2004

Valentin Ossman

3065/4

9819

7590

09/21/2006

DR. MARK FRIEDMAN LTD.

C/o Bill Polkinghorn

Discovery Dispatch

9003 Florin Way

Upper Marlboro, MD 20772

EXAMINER

KIM, PAUL

ART UNIT

PAPER NUMBER

2161

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/790,052	Applicant(s) OSSMAN, VALENTIN	
	Examiner Paul Kim	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/22/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is responsive to the following communication: Amendment filed on 6 September 2006.
2. Claims 1-14 are pending and present for examination. Claims 1, 9 and 12 are independent.
3. Claims 1-14 have been elected and claims 15-23 are non-elected.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 22 March 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

5. The drawings were received on 2 March 2004. These drawings are accepted.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-4** are rejected under 35 U.S.C. 102(b) as being anticipated by Grinfeld (USPGPUB 2003/0031172, hereinafter referred to as GRINFELD), filed on 30 May 2002 with an effective filing date of 31 May 2001, and published on 13 February 2003.
8. **As per independent claim 1**, GRINFELD teaches:

In a communications network carrying data packet traffic, a method for managing a connection context database comprising the steps of:

Art Unit: 2161

- a. obtaining connection information defining a connection {See GRINFELD, [0100], wherein this reads over "[e]xternal memory comprises control information for all existing connections"};
- b. responsive to a search in the context database for said connection, updating a network load sensing mechanism related to said connection {See GRINFELD, [0100], wherein this reads over "connection contexts needed in one or more pipeline modules are transferred to an established connection context database in an internal fast access memory"}; and
- c. using said network load sensing mechanism to manage the connection context database {See GRINFELD, [0100], wherein this reads over "[e]stablished-connection-context-pre-fetch module performs the transfer of connection context data from external memory database to internal fast access memory database, for the connection identified in the established-connection-search module"};

whereby the method provides a dynamic database management that significantly accelerates the processing time of packets received by a host over a network {See GRINFELD, [0100], wherein this reads over "information regarding the connection is available on a fast access basis to later modules in pipeline"}.

9. **As per dependent claim 2, GRINFELD teaches:**

The method of claim 1, wherein said step of obtaining connection information includes receiving a packet associated with said connection and extracting said connection information from said packet {See GRINFELD, [0030], wherein this reads over "There is therefore provided, according to a preferred embodiment of the present invention, a transport protocol receiver for receiving a packet from a network, the packet having a header, payload, and connection context"}.

10. **As per dependent claim 3, GRINFELD teaches:**

The method of claim 2, wherein said receiving a packet includes receiving a TCP/IP packet {See GRINFELD, [0003], wherein this reads over "each segment comprising a TCP header followed by payload data. The segments are transported over the network in IP packets"}.

11. **As per dependent claim 4, GRINFELD teaches:**

The method of claim 3, wherein said connection information includes a source IP address, a destination IP address, a source TCP port and a destination TCP port {See GRINFELD, Figure 1}.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2161

13. **Claims 5-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over GRINFELD, in view of Yoshida (U.S. Patent No. 5,495,480, hereinafter referred to as YOSHIDA), filed on 21 June 1994, and issued on 27 February 1996, and in further view of Robsman et al (U.S. Patent No. 6,446,225, hereinafter referred to as ROBSMAN), filed on 23 April 1998, and issued on 3 September 2002.

14. **As per dependent claim 5**, GRINFELD, in combination with YOSHIDA and ROBSMAN, discloses:

The method of claim 2, wherein said step of updating a network load sensing mechanism related to said connection includes starting a connection dedicated delete timer for each said associated packet of said connection (See YOSHIDA, C1:L30-35, wherein this reads over "the system is provided with a timer in which a time interval is set in advance. When the packet transmission ends, the timer is started, and when the set time has elapsed, the public circuit is disconnected according to a output signal of the timer"), and

wherein said step of using said network load sensing mechanism to manage the connection context database (See GRINFELD, [0039], wherein this reads over "the receiver includes a synchronization module, wherein the context processing engine is adapted to instruct the synchronization module to remove a connection responsive to the connection context") includes deleting said connection from the context database after an expiration event using said dedicated connection timer (See ROBSMAN, C1:L66-C2:L4, wherein this reads over "[w]hen a new session is added, the main session table is locked to prevent other threads from disrupting the table's composition while the session is being added. When a session times out, the table is locked again to allow removal of the session").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by GRINFELD by combining it with the inventions disclosed by YOSHIDA and ROBSMAN. The results of this combination would lead to a method for managing a connection context database, wherein a connection is deleted from a context database upon the occurrence of an expiration event, specifically the lapse of a predetermined time set by the delete timer.

One of ordinary skill in the art would have been motivated to do this modification so that wherein a connection is terminated, it is no longer necessary to retain information regarding the expired connection in the connection context database.

15. **As per dependent claim 6**, GRINFELD, in combination with YOSHIDA and ROBSMAN, discloses:

Art Unit: 2161

The method of claim 5, wherein said starting said connection delete timer includes starting said delete timer for a predefined time period for each said associated packet belonging to said connection {See YOSHIDA, C1:L30-35, wherein this reads over "the system is provided with a timer in which a time interval is set in advance. When the packet transmission ends, the timer is started, and when the set time has elapsed, the public circuit is disconnected according to a output signal of the timer"}, and wherein said deleting said connection after an expiration event includes deleting said connection from the database when said delete timer stops {See ROBSMAN, C1:L66-C2:L4, wherein this reads over "[w]hen a new session is added, the main session table is locked to prevent other threads from disrupting the table's composition while the session is being added. When a session times out, the table is locked again to allow removal of the session"}.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by GRINFELD by combining it with the inventions disclosed by YOSHIDA and ROBSMAN. The results of this combination would lead to a method for managing a connection context database, wherein a delete timer is started for a predefined time period and the connection is deleted after the expiration event occurs.

One of ordinary skill in the art would have been motivated to do this modification so that wherein a connection is terminated, it is no longer necessary to retain information regarding the expired connection in the connection context database.

16. **As per dependent claim 7**, GRINFELD, in combination with YOSHIDA and ROBSMAN, discloses:

The method of claim 5, wherein said starting said connection delete timer for each said associated packet belonging to said connection includes adding a new entry for said connection to the context database if said connection is not found in the context database {See ROBSMAN, C1:L66-C2:L4, wherein this reads over "[w]hen a new session is added, the main session table is locked to prevent other threads from disrupting the table's composition while the session is being added. When a session times out, the table is locked again to allow removal of the session"}.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by GRINFELD by combining it with the inventions disclosed by YOSHIDA and ROBSMAN. The results of this combination would lead to a method for managing a connection context database, wherein the connection is added to the context database if the connection is not found.

Art Unit: 2161

One of ordinary skill in the art would have been motivated to do this modification so that wherein a connection is started, information regarding the connection may be maintained accordingly in the context database.

17. **As per dependent claim 8**, GRINFELD, in combination with YOSHIDA and ROBSMAN, discloses:

The method of claim 5, wherein said starting said connection delete timer for each said associated packet belonging to said connection includes starting said delete timer if said connection is found in the context database {See YOSHIDA, C1:L30-35, wherein this reads over "the system is provided with a timer in which a time interval is set in advance. When the packet transmission ends, the timer is started, and when the set time has elapsed, the public circuit is disconnected according to a output signal of the timer"; and C2:L4-6, wherein this reads over "[t]he table selects one of the timer set values based on the type of a data packet to be transmitted"}.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by GRINFELD by combining it with the inventions disclosed by YOSHIDA and ROBSMAN. The results of this combination would lead to a method for managing a connection context database, wherein the delete timer is started once the connection is found in the context database.

One of ordinary skill in the art would have been motivated to do this modification so that wherein a connection is found, the system and method for managing the context database may delete the connection once a predetermined time period has run for deletion of the connection.

18. **As per independent claims 9 and 12**, GRINFELD, in combination with YOSHIDA and ROBSMAN, discloses:

A method for dynamically managing a connection context database in a communications network comprising the steps of:

- a. receiving a packet in an aggregation unit {See GRINFELD, [0030], wherein this reads over "There is therefore provided, according to a preferred embodiment of the present invention, a transport protocol receiver for receiving a packet from a network, the packet having a header, payload, and connection context"};
- b. extracting connection information from said packet {See GRINFELD, [0030], wherein this reads over "There is therefore provided, according to a preferred embodiment of the present invention, a transport protocol receiver for receiving a packet from a network, the packet having a header, payload, and connection context"};

Art Unit: 2161

- c. searching the context database for said connection, and if said connection is not found {See GRINFELD, [0100], wherein this reads over "pipeline makes use of two types of databases of connection information, known in the art as connection contexts" and "connection contexts needed in one or more pipeline modules are transferred to an established connection context database in an internal fast access memory"};
- d. adding a new connection to the context database {See ROBSMAN, C1:L66-C2:L4, wherein this reads over "[w]hen a new session is added, the main session table is locked to prevent other threads from disrupting the table's composition while the session is being added. When a session times out, the table is locked again to allow removal of the session"};
- e. starting a timer for said new connection, said timer dedicated to said new connection and configured to stop after a determined time period {See YOSHIDA, C1:L30-35, wherein this reads over "the system is provided with a timer in which a time interval is set in advance. When the packet transmission ends, the timer is started, and when the set time has elapsed, the public circuit is disconnected according to a output signal of the timer"; and C2:L4-6, wherein this reads over "[t]he table selects one of the timer set values based on the type of a data packet to be transmitted"}; and
- f. deleting said new connection from the context database when said timer stops after said determined time period {See ROBSMAN, C1:L66-C2:L4, wherein this reads over "[w]hen a new session is added, the main session table is locked to prevent other threads from disrupting the table's composition while the session is being added. When a session times out, the table is locked again to allow removal of the session"}.

19. **As per dependent claims 10 and 13, GRINFELD teaches:**

The method of claim 2, wherein said receiving a packet includes receiving a TCP/IP packet {See GRINFELD, [0003], wherein this reads over "each segment comprising a TCP header followed by payload data. The segments are transported over the network in IP packets"}.

20. **As per dependent claims 11 and 14, GRINFELD teaches:**

The method of claim 3, wherein said connection information includes a source IP address, a destination IP address, a source TCP port and a destination TCP port {See GRINFELD, Figure 1}.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chase can be reached on (571) 272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2161

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Kim
Patent Examiner, Art Unit 2161
TECH Center 2100



SAM RIMELL
PRIMARY EXAMINER